

## I. INTRODUCTION

- A. Purpose: To provide requirements regarding the acceptable installations and dispensing operations, from aboveground flammable or combustible liquid storage tanks, into motor vehicles.
- B. Scope: This Regulation shall establish the requirements for the installation of aboveground storage tanks for the purpose of dispensing Class I flammable and Class II combustible liquids.

NOTE: This Regulation does not govern the temporary installations at construction sites or farms. Those specific operations are covered in Article 79, Section 7904.2 and Regulation #25.

- C. Author: The Deputy Chief of the Prevention Services Bureau, through the Assistant Fire Chief (Fire Marshal) of the Fire Prevention Division, is responsible for the content, revision, and periodic review of this regulation.
- D. Authority: County of Los Angeles Fire Code (LACFC), Title 32 of the Los Angeles County Code, also herein referred to as the Fire Code.
- E. Definitions:
  - 1. **SPECIAL ENCLOSURE:** Liquid tight and vapor tight, not containing backfill. Sides, top and bottom are reinforced concrete at least 6 inches thick with openings for inspection through the top only and surrounded by a clear space of not less than 3 feet.
  - 2. **PROTECTED ABOVE GROUND TANKS:** A listed tank system consisting of a primary tank provided with protection from physical damage and fire-resistive protection from a high-intensity liquid pool fire exposure. The tank system is allowed to provide these protection elements as a unit or is allowed to be an assembly of components or a combination thereof.

## II. RESPONSIBILITY

- A. All Department personnel shall familiarize themselves with this regulation so that they may inform the public of the proper procedures for obtaining approval for installation and subsequent permitting.
- B. The Petroleum-Chemical Unit of the Fire Prevention Division shall:

1. Review for approval, plans submitted for the proposed installation.
  2. Perform any on-site inspections during construction.
  3. Perform the final on-site inspection and issue the operating permit. This permit shall remain valid until revoked.
- C. The appropriate Engine Company or Area Fire Prevention Unit shall:
1. Incorporate a copy of the permit into the property's fire prevention file.
  2. Inspect the above ground storage/dispensing operation during the regular fire prevention inspection and verify that the operation is still within the parameters established for the permitting process.

### **III. POLICY**

- A. The storage and dispensing of motor fuels into tanks of motor vehicles from above ground tank(s), outside of buildings, shall be in accordance with this Regulation. This regulation does not apply to the dispensing of LPG.

### **IV. PROCEDURES**

- A. Plans and Permits
1. Provide 3 complete sets of plans to the Petroleum-Chemical Unit of the Fire Prevention Division, located at the Fire Prevention Headquarters, 5823 Rickenbacker Road, Commerce, CA 90040-3027. The plans may be mailed or delivered in person.
    - a. Plan sheet size must be 24 inches X 36 inches. The scale size must be  $\frac{1}{4}$  inch = 1 foot (preferred), or  $\frac{1}{8}$  inch = 1 foot. Include a vicinity map on the plan.
    - b. Address of the subject property, type of construction and occupancy code classification per the Building Code shall be indicated on the plans submitted.
    - c. The installing and designing contractor's name, address, phone number, license type and license number must be on the plans submitted.

- d. Detailed drawings with appropriate engineering stamp(s) as required. Reference all nationally recognized standards used and place all required fire departments notes on the plans submitted.
  - e. Provide a detailed description of all work to be completed. This should include a timetable for project completion.
2. The plans shall include all of the following information either visually or verbally:
- a. Approval from Community Development/City Planning or Regional Planning.
  - b. Copy of the Building and Safety plan check fee receipt.
  - c. Quantities and type(s) of liquids to be stored/dispensed.
    - (1) Maximum of 12,000 gallons per individual primary protected above ground tank, or
    - (2) Maximum of 48,000 gallons aggregate capacity.
  - d. Location of the tanks on the property, distances from tanks and dispensers to property lines, buildings and each other.
    - (1) Above ground tanks shall not be placed in required and/or recorded side yards used for area justification of any building on the property. Contact the Building Department for information.
    - (2) Individual tank capacity of less than or equal to 6,000 gallons minimum distance to property line including the opposite side of a public way is 15 feet. For tanks greater than 6,000 gallons the minimum distance is 25 feet.
    - (3) The distance from the tank to the nearest side of any public way or from the nearest important building on the same property. The minimum distance as follows: 5 feet for tanks 6,000 gallons or less and 15 feet for tanks greater than 6,000 gallons
    - (4) Tank installations having the maximum allowable aggregate capacity shall be separated from other installations of protected above ground tanks by not less than 100 feet.

- (5) Storage vessels for LP-Gas and CNG shall be located 20 feet or more from above ground tanks containing flammable or combustible liquids.
- e. Above ground tank construction and design. Cut sheets shall be utilized to meet these criteria.
  - (1) Special Enclosures. When installation of tanks in accordance with Section 7902.6 (underground tank storage) is impractical, or because of property or building limitations; tanks for Class I, II or III-A liquids are allowed to be installed in buildings in special enclosures designed per L.A. County Fire Code 5202.3.6.
  - (2) Dispensing devices are allowed to be installed on top of or immediately adjacent to protected above ground tanks.
  - (3) Tank supports and connections shall be designed to resist damage as result of seismic activity in accordance with the Building Code.
  - (4) Tanks shall be provided with an automatic fuel shut-off device capable of stopping delivery of fuel when the level in the tank reaches 90 percent of the tank capacity.
  - (5) Tank and tank enclosure openings shall be through the top only. Approved anti-siphon devices shall be installed in each external pipe connected to the tank when the pipe extends below the level of the top of the tank.
  - (6) The fill opening shall be equipped with a closure designed so that it may be locked.
  - (7) Normal and emergency tank ventilation. Normal vent pipe outlets shall be located not less than 12 feet above ground level.
  - (8) Adequate grounding and bonding shall be provided to prevent the accumulation of static electricity.
- f. Foundations, supports and anchorage for above ground tanks shall be in accordance with Fire Code Section 7902.1.16

- g. Tanks exceeding 55 gallons shall be provided with spill control to prevent the flow of liquids to adjoining areas as per section 8003.1.3.2 L.A. County Fire Code.
- h. Location of Fire Department vehicle access will be within 150 feet of the tank.
- i. Location of existing hydrants, Fire Department connections, post indicator valves.
- j. Class I and Class II liquids shall not be dispensed into the fuel tank of a motor vehicle from above ground tanks except:
  - (1) When such tanks are installed inside special enclosures in accordance with Section 5202.3.6. U.F.C.
  - (2) When approved, such tanks are installed as protected above ground tanks per Section 5202.3.7. U.F.C.
  - (3) When approved, such tanks are installed in below grade vaults per Section 5202.3.8 U.F.C.
  - (4) Protected above ground tanks shall be provided with secondary containment, drainage control or diking in accordance with Sec. 7901.8 or 7902.2.8. U.F.C.
- k. Drainage Control
  - (1) Provisions shall be made to prevent liquids spilled during dispensing operations from flowing into buildings. Acceptable methods include grading driveways, raising doorsills, or other approved means.
- l. Emergency shutdown.
  - (1) Shall be located within 100 feet, but no closer than 25 feet from the dispenser.
  - (2) California State Fire Marshal approved 2A-20B:C extinguisher, mounted adjacent to emergency shutdown.
- m. Site security information/precautions.
  - (1) Storage areas shall be protected against tampering or trespassers by fencing or other control measures.

- (2) Guard posts or other means shall be provided to protect exterior of tanks from vehicular damage.
  - (a) Constructed of steel not less than 4 inches in diameter and concrete filled.
  - (b) Set not less than 3 feet deep in concrete footing of not less than 15 inches diameter.
  - (c) Set with the top of the posts no less than 3 feet above ground.
  - (d) Spaced not more than 4 feet between posts on center.
  - (e) Located not less than 5 feet from the tank.
- n. NFPA 704 placards identifying the material within tanks over 100 gallons in capacity.
  - (1) Placard shall be 15 inches X 15 inches with 6 inch black numbers.
  - (2) Placards shall be accordance with UFC Standard 79-3
- o. Class I and II liquids shall be transferred from tanks by means of fixed pumps designed and equipped to allow control of the flow and to prevent leakage or accidental discharge.
  - (1) Supplemental means shall be provided outside of the dispensing device whereby the source of power can readily be disconnected in the event of fire or other accident.
  - (2) Listed automatic-closing hose nozzle valve with or without a latch-open device shall be provided.
  - (3) Provide a product delivery hose equipped with an emergency breakaway device. Hoses shall be a maximum of 18 feet in length.
  - (4) A spill container with a capacity of not less than 5 gallons shall be provided for each fills connection. For tanks with a top fill connection, spill containers shall be non-combustible and shall be fixed to the tank and equipped with a manual drain valve that drains into the primary valve.

- (5) All electrical wiring and equipment in the dispensing area shall be installed in accordance with the Electrical Code 7901.4 F.C.
- (6) Piping, valves, fittings and related components shall conform to nationally recognized engineering standards listed for the application, or be approved by the chief. 7901 11 F.C.
- (7) Signs shall be posted in storage areas prohibiting open flames and smoking. 7902.1.3.1 F.C.
- (8) Maintenance: Tanks, Special Enclosures and dispensing systems shall be maintained in proper condition. Damage shall be repaired immediately using materials having equal or greater strength and fire resistance. Listed tanks or systems shall be repaired in a manner that retains their listing or be replaced with new listed tanks.

p. Final Approval and Permits

- (1) All plans shall be submitted and approved BEFORE any work is initiated.
- (2) Upon completion/review of the submitted plans, a member of the Petroleum-Chemical Unit will contact you for plan pick-up.
- (3) When ALL work on the project has been completed, contact the Inspector responsible for the initial plan review. A final inspection of the site and project will be conducted.
- (4) Upon completion of the final inspection and any subsequent corrections an operating permit shall be issued for the project.
  - (a) The final inspection shall take place prior to the tanks being filled and placed into service.